

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

Date of mailing
(day/month/year)

01.03.2006

Applicant's or agent's file reference
WO 21.1189

WL-FE

IMPORTANT NOTIFICATION

International application No.
PCT/EP2005/001436

International filing date (day/month/year)
08.02.2006

Priority date (day/month/year)
18.03.2004

Applicant

SERVICES PETROLIERS SCHLUMBERGER et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 30(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosures, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference WO 21.1189		FOR FURTHER ACTION		See Form PCT/PEA416
International application No. PCT/EP2005/001490		International filing date (day/month/year) 08.02.2005		Priority date (day/month/year) 18.03.2004
International Patent Classification (IPC) or national classification and IPC E21B47/08				
Applicant SERVICES PETROLIERS SCHLUMBERGER et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 602 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 13.10.2005		Date of completion of this report 01.03.2006		
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.O. 5818 Patentsaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tk: 31 851 epo nl Fax: +31 70 340 - 3010		Authorized Officer Schouten, A Telephone No. +31 70 340-4088		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2005/001436

Box No. 1 Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*.

Description, Pages

1-11 as originally filed

Claims, Numbers

1-21 filed with telefax on 18.01.2008

Drawings, Sheets

(17-77) as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY

International application No.
PCT/EP2005/001436

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-21
	No: Claims	
Inventive step (IS)	Yes: Claims	1-21
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-21
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

- 1 Reference is made to the following documents:

D1 : WO 02/101194 A (MAUTE ROBERT ; REM SCIENT ENTPR INC (US)) 19
December 2002 (2002-12-19)
D2 : US 5 631 562 A (CRAM MILTON E ET AL) 20 May 1997 (1997-05-20)
D3 : US 4 862 090 A (VANNIER DANIEL ET AL) 29 August 1989 (1989-08-29)

- 2 The document D1 is regarded as being the closest prior art to the subject-matter of
independent claim 1, and shows:

A borehole logging tool comprising a sensor loop. The sensor loop includes a series
of contiguous sensors that act as electromagnetic flowmeters and provide fluid
measurements covering the entire circumference of the sensor loop. The sensor loop
includes an elastic element that forces the sensor loop outward to maintain pressure
along the sensor loop circumference against the interior borehole wall. The sensor
loop is designed to lie at a non-perpendicular angle to the wellbore axis, and
mechanical arms press the top and bottom of the loop against the borehole inner wall
(see also figures 3 and 3a of D1).

The subject-matter of claim 1 differs from this known logging tool in that the claimed
logging tool comprises:

- pads that are pivotable about a radial axis relative to the tool body, and the pads are
elongate pads adjacently arranged to provide different circumferential coverage
according to the orientation with respect to the longitudinal axis of the borehole.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- 2.1 The problem to be solved by the present invention may be regarded as: providing constant total circumferential coverage with a logging tool having pads in boreholes with different diameters and shapes.
- 2.2 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: by allowing the pads to rotate about a radial axis relative to the tool body, the orientation of the pads can be changed to adjust the actual amount of circumferential coverage by the pads and so accommodate different borehole diameters and shapes while providing the same degree of circumferential coverage (see paragraph [0006] of the application as originally filed).
- 2.3 Claims 2-19 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
- 2.4 Since the subject-matter of independent claims 20 and 21 corresponds to the subject-matter of claim 1, the same reasoning as given for claim 1 will apply *mutatis mutandis*. Therefore claims 20 and 21 also meet the requirements of the PCT in respect of novelty and inventive step (Article 33(2) and (3) PCT).